Blue Triangle

Butterfly & Other Invertebrates Club Inc. Newsletter

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CLUB PLANNING AND ORGANIZING GROUP - 2000

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PLANNING AND ORGANIZATION MEETINGS

A quarterly meeting is scheduled in order to plan club activities and the newsletter. See BOIC Programme.

CONTACT ADDRESS

PO Box 2041, Runcorn 4113, Queensland

AIMS OF ORGANIZATION

- To establish a network of people growing butterfly host plants;
- To hold information meetings about invertebrates;
- To organize excursions around the theme of invertebrates e.g. butterflies, fireflies, ants, dragonflies, beetles, freshwater habitats, and others;
- To promote the conservation of the invertebrate habitat;
- To promote the keeping of invertebrates as alternative pets;
- To promote research into invertebrates;
- To encourage the construction of invertebrate friendly habitats in urban areas.

NEWSLETTER DEADLINES

If you want to submit an item for publication the following deadlines apply:
March issue – February 21st
June issue – May 21st
September issue – August 21st
December issue – November 21st

EDITORIAL

Since starting in October 1994, we have developed very successfully as a club. We have done this by drawing on the skills and talents of a committed core of members. Recently this core has expanded and we look forward to a highly productive year. With the hard work of our Publicity Officer, Lois, our membership has been rapidly expanding. Our services to you, our members, include this quarterly newsletter, jam-packed with information. However, for those of you in the vicinity of Brisbane, we also offer regular activities, such as excursions or meetings with guest speakers. Please come along so that we can meet you, and you can get to know us. With this being our 17th issue, our Treasurer, Rob, has compiled an index. This will be of great assistance in tracking back through what we have covered to date. It will be available soon. We hope you enjoy this issue, and many thanks to all the contributors. Your effort to help promote butterflies and other small creatures is greatly appreciated.

Helen Schwencke

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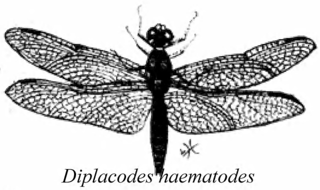
EXCURSION REPORT

BOIC Club Excursion Report – Pine Mountain ("Kholo Enviroplan") Reserve - 18 March 2000.

Several members assembled at Kholo gardens before moving on to the now familiar Pine Mountain site. This area is accessed via an easement through private farmland. The reserve is virtually an island of natural vegetation with some unlogged hoop pine areas. The diverse flora includes some butterfly host plants – of course! We found fruit of *Amorphospermum antilogum* – probable host of the common red-eye – and the scarlet fruit of *Hernandia bivalvis*. Some weed incursion is evident. (Some of the weeds are host plants too!)

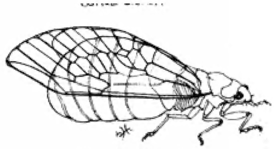


Diplacodes haematodes

On this visit, the area was very much drier than last time, with many plants showing evidence of stress, including wilting. Obviously this district had missed out on some of the recent rains. We also failed to spot any "new" butterfly species; although on this occasion we did finally see adults of the Australian Admiral species *Vanessa itea.* Frank had a close encounter with some *Polistes* wasps, receiving a nasty sting to the face. The Invertebrates strike back! Rob pointed out a vivid scarlet specimen of dragonfly, a male *Diplacodes haematodes* (which is smaller and a more vivid red than the species, *Orthetrum villosovittatum*, often seen hanging out around the garden ponds in Brisbane.) Other interesting sightings were a mantid neuroptera and a metallic blue Chrysadid wasp – which parasitises other wasps.

Cicadas encountered included the vocal Phantom Knight *Psaltoda* species*,* and the following:

1.	Clanger	*Psaltoda claripennis*
2.	Bark Squeaker	*Pauropsalta corticinus*
3.	Black Tree-ticker	*Birrima varians*
4.	Hibiscus Cicada	*Cicadetta forresti*
5.	Floury Baker	*Abricta curvicosta*
6.	Bottle Cicada	*Glaucopsaltria viridis*



Bottle Cicada

While the group didn't add to the butterfly list for the area, butterflies were certainly there. Sightings included:

▪ Orchard Swallowtail – male & female	*Papilio aegeus*
▪ Albatross – female & male	*Appias paulina*
▪ Blue Triangle	*Graphium sarpedon*
▪ Pale Triangle	*Graphium eurypylus*
▪ Australian Admiral	*Vanessa itea*
▪ Wanderer – caterpillar & male and female adults	*Danaus plexippus*

Common Aeroplane	*Phaedyma shepherdi*
Greenish Grass-dart	*Ocybadistes walkeri*
Australian Gull	*Cepora perimale*
Tailed Emperor	*Polyura(pyrrhus)sempronius*
Double-spotted Line-blue	*Nacaduba biocellata*

There were numerous leaf eating beetles and a splendid longicorn beetle on a native hibiscus plant.

An enjoyable and leisurely ramble. Most members had to depart early and conditions weren't favourable for light trapping, so the group called it a day before dusk.

Thank you to the all the participants on the excursion who contributed the material for this report.

Rosylin Popple

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Light Trap Evening – 13th March 2000 – Olivia Park, Carina Heights

The club joined with the White's Hill Pine Mountain Community Group for our second light trap evening at this pleasant park adjacent to the large Pine Mountain reserve. The W.H.P.M. members (especially the Dalgleish sisters-in-law, Beverley and Rosamund) organized a superb sausage sizzle for which our members were very appreciative. Wayne and Alana Cameron again hosted us in their back garden and provided light and power for our mercury vapour lamp.

Some of the moths identified, from three of the largest families in the order Lepidoptera, included:

1. The Emerald moth *Prasinocyma rhodocosma* (family Geometridae) which feeds on young eucalypt leaves,
2. The Figleaf moth *Agrioglypta excelsalis* (family Pyralidae) which feeds on leaves of cultivated figs and native Sandpaper figs e.g. *Ficus coronata* which is in the area. It is a leaf roller/folder and can be quite destructive, and
3. The tiny white-banded pyralid known, as the "Beet Webworm" (*Hymenia recurvalis*) a pest of beetroot and silver beet.

As well there were various Noctuid moths, leaf and tree hoppers of the order Hemiptera, ants and wasps belonging to the Hymenoptera including some "Micro-hymenoptera" and several Sugar Ants (*Camponotis* species) which tend the larvae of various Lycaenid butterflies. In addition we saw some Caddisflies (order Trichoptera), Flies (order Diptera) and some beetles (order Coleoptera) especially Ladybirds (family Coccinellidae) and leaf-eating beetles (family Chrysomelidae).

In spite of these finds, the evening was significant for what didn't come to the light, as we saw no crickets, grasshoppers, katydids, mantids, phasmids, cockroaches, termites, lacewings, ant-lions and alas, for Lindsay, no cicadas!

We were at a disadvantage due to "competition" from a full moon, young "eager-beavers" who "hogged" the light and cast wide shadows, and lack of suitable breezes to dislodge insects from their lofty perches.

However, the children enjoyed themselves, especially the delightful, auburn-haired Barns children, Sarah and Allyson, who kept us all entertained with their cute commentary and fastidious attention to detail (even of the smallest moths!). This was a most enjoyable and memorable night – thanks again to Heather Barns and the other WHPMCG members.

John Moss

REPORTS

On Monday morning 22nd May last, I was privileged to hear Queensland Museum's Curator of Insects, Dr Geoff Monteith, give an excellent general talk on insects to the Redlands Branch of the University of the Third Age (U3A). This talk was part of a program of weekly talks on natural history topics held at the Donald Simpson (over 50's) Centre at Bloomfield St., Cleveland, with the assistance of the Redland's Branch of the W.P.S.Q. and the Nature Conservation Unit of the Redland Shire Council. (See program this issue)

Several of our own members and associates are programmed to give talks on the subjects of butterflies, cicadas and dragonflies as well as talks by many other well known Queensland Museum, University of Queensland, Department of Environment etc. authorities. The organizer, Mr. Tony Iveson, has said that everyone is welcome to attend irrespective of age or place of residence.

Geoff's talk included commentary on the mystery of part of the life cycle of our giant Wood Moths (Cossidae) and why having 6 legs is better than 2 or 10! (see "You Asked" this issue). He brought along some of his (pet!) Giant Burrowing Cockroaches and Phasmids (Stick Insects), the former reputed to live for up to 7 years on a diet of rehydrated, fungus inoculated, dried leaves! Geoff showed how native male Rhinoceros beetles fight over females while perched on the broad limbs of exotic Poinciana trees (many of which line Brisbane suburban streets), but was unable to throw any light on what these beetles used as perches for their sparring encounters prior to urbanization! – Any suggestions from our readers?

John Moss

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The following article, written by John Moss, was featured in the Redland Shire Council Bushcare Newsletter "Beating 'Round the Bush" Winter Edition 1999.

Illidge's Ant-blue

Three of the seven threatened butterfly species currently listed under the state's Nature Conservation (Wildlife) Regulation as "Endangered" or "Vulnerable" occur or were once known to occur in the Redlands. These are the Illidge's Ant-blue (*Acrodipsas illidgei*), the Australian Fritillary (*Argyreus hyperbius inconstans*) and the Richmond Birdwing (*Ornithoptera richmondia*). Under the current revision of status, two of them (*A . illidgei* and *O. richmondia*), will be downgraded from "endangered" to "vulnerable".

In the case of the former, its habitat, the mangroves, is now largely protected by government legislation. In the case of the Richmond Birdwing, a Recovery Plan, involving the planting of many thousands of its host plant vine (*Pararistolochia praevenosa*), initially by school children members of the CSIRO's Double Helix Science Club and more recently by many others (including gardeners, bushcarers and conservationists), has the potential to reverse the decline of this species.

Also important has been the removal of the toxic weed, Dutchman's Pipe Vine (*Aristolochia elegans*). It is upon this that the unknowing female butterflies oviposit and waste their eggs, as the larvae cannot develop to maturity. More recently, the "Adopt-a-Caterpillar" Scheme has seen butterfly larvae distributed to some school *P. praevenosa* vine plots, to enable students to establish viable, self-sustaining butterfly colonies.

Richmond Birdwing

Declining species

The third species, the Australian Fritillary (which has not been officially sighted in Queensland since 1995), has been in decline for many years through the clearing of its preferred habitat (*Melaleuca* paperbark wetlands) for sugar cane plantation and other farming, housing or industrial development.

Its host plant, the Arrowhead Violet (*Viola betonicifolia*), commonly grows within this habitat, but because of the recent six year drought, has itself been in decline. It has only started to pick up since the moister weather conditions of the last 18 months. Unfortunately the butterfly itself has not reappeared in Queensland, although at least two colonies are known to exist in New South Wales.

An Interim Recovery or Action Plan is underway. Currently awaiting funding, the plan will identify significant remaining Melaleuca Wetland and Violet distribution, protect such areas, replant some with violets and confirm any butterfly sightings. Eventually it is proposed to captive breed the species and release butterflies into appropriate locations.

Aust. Fritillary lifecycle and host plant

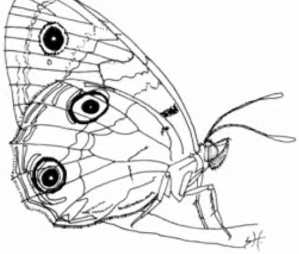
Extinct in Queensland?

A fourth species of butterfly, not listed in the Regulations, but equally as important from a conservation viewpoint, is the sword grass Brown (*Tisiphone abeona* subspecies *morrisi*).

This subspecies was previously recorded from Kempsey north to Southport, in coastal Wallum where there are *Gahnia* (Sawsedge) swamps. Its preferred host plant is *Gahnia clarkei* but it will eat the softer juvenile foliage of *G. sieberiana*. It is now considered extinct in Queensland. The furthest north it now occurs is the Tweed River.

There are areas of suitable habitat in the Redlands where it could occur and may well once have occurred, such as along Tingalpa Creek tributaries at Venman's Bushland National Park, Buhot Creek and Stockyard Creek, where *G. clarkei* is common. Also the considerable areas of *G. sieberiana* sedgeland on North Stradbroke Island, Macleay Island and parts of the mainland, would be quite suitable habitat.

Sword Grass Brown



There has been quite a lot of time spent searching for this subspecies in recent years. Meryl Dobe ("Butterfly Sightings" 1999 Autumn Edition) reported on one such expedition to Macleay Island. Outside the Shire, suitable habitat also occurs at Couran Cove on South Stradbroke Island, Yugarapul Park on Bulimba Creek at Runcorn/Sunnybank and at Tamborine Mountain where the subspecies was once known to occur.

Disappearing Habitat

A related subspecies, *T. abeona rawnsleyi*, ranges from around Maleny/Beerwah/ Caloundra north to Cooloola and Fraser Island. As there is still quite sufficient habitat within its range, this subspecies is not under threat. Among the causes of its decline were the clearing of the *Gahnia* swamps for cane-farming and housing development (similar to the situation with the Australian Fritillary). Bushfires, particularly hot wildfires over large areas, are also known to be important in its local extinction, as all stages of the butterfly – egg, larva, pupa and adult – perish. Repopulation is very slow or nonexistent if the area burnt is large, as the species is very sedentary and cannot travel large distances, unlike the Richmond Birdwing females which are thought to travel up to 30 to 40km in a day.

Importance of Protection

If we wish to see these species flying again in the Redlands, it is important that suitable habitat is protected and weeding/revegetation regimes undertaken. The local Bushcare groups fulfil an important role here. The Melaleuca Drive Bushcare Group has already already started replacing a large number of *Gahnia sieberiana* plants in the Melaleuca Reserve, adding to the few remnant plants that were already in existence. Once a suitable Action Plan is in operation for this butterfly, we will be keen for local authorities and Bushcare groups to be involved in its recovery.

Propagation of species.

If you have any information on the propagation of sawsedges - in particlar *G. clarkei* – but including *G. melanocarpa, G. aspera* and *G. sieberiana*, please contact John Moss on 32452997.

Stop Press

A small colony of the southern coastal Qld. and North-eastern N.S.W. subspecies of the Swordgrass Brown butterfly (*Tisiphone abeona morrisi*), thought to be extinct in Queensland, has been found near Jacob's Well (at a small site threatened by development) by our associate Glenn Leiper, Principal of the Jacob's Well Environmental Education Centre. More on this in a later issue.

John Moss

CREATURE FEATURES

BLUE TRIANGLE*(Graphium sarpedon choredon)*

This was the first of the butterfly larvae I raised all the way from egg to adult. Where we lived in Sydney, we had a camphor laurel tree approximately 3 metres tall, (which was already growing there when we moved in.)

I had always admired the butterfly known as the "Blue triangle," from the first time I had seen one.

Its speed was incredible and even when feeding, it kept its wings in constant motion, ready to move on at the first sign of danger. (This constant wing motion is typical of all of our swallowtails.)

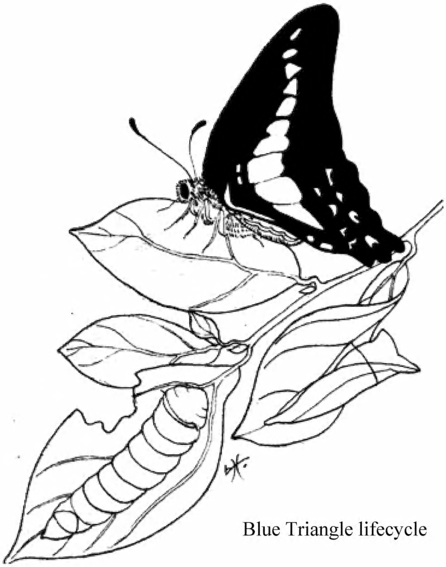
The adult butterfly has a wingspan of approximately 55mm. Its wings are a bright skyblue, with a black border approximately 8cm wide around the outer edge, this causes the typical "blue triangle" shapes on each side. The lower wings have four blue spots included in their black border.

The underside of the butterfly is the same as the top, but duller, with some red markings added. The male and female look identical, with the main identifying feature being feathers that appear on the male, on the inner edge of the lower wing, upperside, when the wings are expanded.

The larvae are smooth, olive-green when young, changing to beautiful lime–green in colour, with a lemon–yellow band running transversly across the upper body.

The pupae are lime–green, with raised ridges running from head to tail, imitating perfectly the venation and colour of the underside of the leaf on which it pupates. The raised projection on its head, does not detract from this camouflage.

Since moving to Queensland, I have discovered that camphor laurel is a horrible pest and many natives can be used as substitutes. The best I have found, if you have the room, being *Cryptocarya erythroxylon* and *Cryptocarya triplinervis*. These alternatives will serve as food sources for both birds and butterflies, losing none of the habitat features offered by the camphor laurel.



Blue Triangle lifecycle

These alternatives can be obtained from Barung Landcare, Maleny. So lose those camphor laurels and replace them with the native equivalents.

Further information can be obtained by reading *"Butterflies of Australia"* by Common and Waterhouse 1981.

Bob Miller

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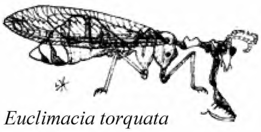
MANTISPID LACEWINGS – order Neuroptera, family Mantispidae

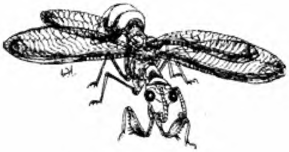
The Mantis Flies or Mantispid Lacewings are among the most incredibly shaped insects, in so far as they seem to be a composit of the features of the Preying Mantis (order Mantodea) and Lacewings (order Neuroptera) having two pairs of gauzy wings, a long neck, relatively large head and eyes (of Mantis shape) and Mantis-like spiny raptorial forelegs. However they are definitely Lacewings, as true mantids either have no wings (in the nymph stage and some adults) or have hard, coloured forewings and gauzy hindwings. Another difference is that Mantid juveniles are nymphs and look very much like smaller versions of the adults and are predatory, whereas Mantispid Lacewings have larvae of similar appearance to other lacewings, but which are parasitic on the egg sacs of spiders and larvae of social wasps.

The illustrations by Lois Hughes are of a specimen of the uncommon *Euclimacia torquata* which was collected at Mt. Mellum near Landsborough/Beerwah in the Sunshine Coast hinterland on Australia Day 1998. It came into an ultraviolet light trap whilst Lindsay Popple and I were doing a cicada survey. I recalled that 16 months earlier, on the 16th of October 1996, one had appeared in a light trap at Olivia Park, Carina Heights at the first BOIC night outing. Recently (22nd March 2000), whilst doing entomological surveying in the upper Bulimba Creek catchment, Tom Creevey and I found one clinging to a grass stem, having first decided that it was a wasp.



Euclimacia torquata

It is obvious that this large species is a wasp mimic and thereby may gain protection from its predators such as lizards and birds. But the question comes to mind, that if it is a species that oviposits in nests of social wasps, does it gain protection from this resemblance while it is parasitising their larvae, as it would not otherwise be able to go about its business without alarming many dozens of wasp brood attendants, the sting from any one of which would be instantly lethal. Surely it would require some chemical assistance to disguise itself? Any further information from our readership would be most welcome.



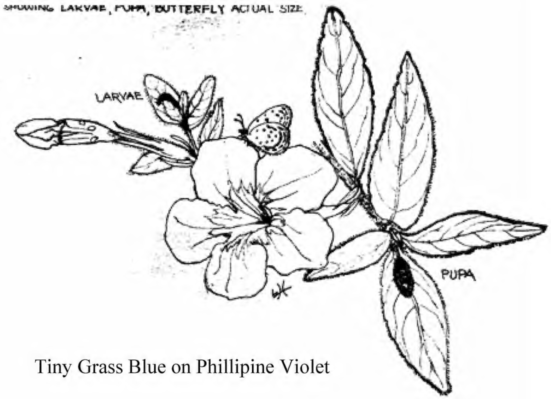
Euclimacia torquata

I am grateful to Dr. G. Monteith of the Queensland Museum Entomology Department for assistance with the identification of this insect.

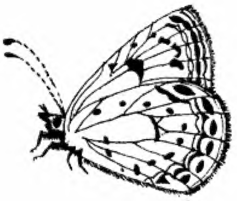
John Moss

CREATURE NOTES

Creature Note #23 – Tiny Grass Blue(*Zizula hylax altenuata)*


SHOWING LARVAE, PUPA, BUTTERFLY ACTUAL SIZE
LARVAE
PUPA

Tiny Grass Blue on Phillipine Violet



Adult magnified x 5

Pupa (magnified)

We have a lot of Common Grass Blue butterflies in our grass and it took several days for me to realize that the butterfly I was seeing, though similar, was different. Firstly, it was much smaller, though a similar pale blue grey colour and secondly it was hovering around a plant which has become a real nuisance because of its invasive habit, although it has taken many years to do so. I've been told its called Phillipine Violet, but I have no botanical name for it. I saw the first female laying eggs close to the flower bud or on the tiny new leaves on 6th January. It was so engrossed in its task I was able to closely examine it with a magnifying glass and discovered it was the Tiny Grass Blue (*Zizula hylax*). I quickly consulted Butterflies of Australia only to discover that the life cycle has not been recorded in it. The female continued to lay, daily, so I collected some on plants on 10th January as I saw them deposited, afraid I'd never find the ever so tiny eggs again in all the undergrowth. Between the 22nd to 25th January, 2000 at least five females and several males spent their days around the violets. On the 27th January I saw evidence of eatings and frass on the inside and outside plants and finally saw the caterpillar (it had been inside the flower bud) carefully draped over the tiny new leaves and well camouflaged. It was larger than I imagined, given the tiny size of the egg and butterfly, typical Lycaenid shape with scalloped edges, bright green in colour with a maroon/brown dorsal stripe. It hadn't eaten much, mostly the base of the flower bud, when it moved to a larger leaf, near the stem and sat, the colour from the dorsal stripe fading. Next day, 29th January, the overall colour had become faded yellowish green, the shape hardly changing. Under the magnifying glass tiny hairs could be seen all over except in the wing shaped area, which was a beige colour. On 5th February the pupa was dark grey (my first thought was that it had gone mouldy like so much else in and around the house from all the rain!) Happily, a few hours later a beautiful male emerged, bluish/purple above with a delicately traced pattern of scallops, dots and lines of mid grey, many surrounded by a halo of silvery white, all on a silver grey background. It had a really cute face shape. I was really pleased to have witnessed the lifecycle of this, one of our tiniest butterflies, especially as it made use of this violet I've tried unsuccessfully to eradicate for years.

Footnote: I moved a potted plant, Karamat (*Hygrophila angustifolia*), known to be a host plant of the Tiny Grass Blue into the vicinity of the violets and all the activity and they totally ignored it. No accounting for taste!

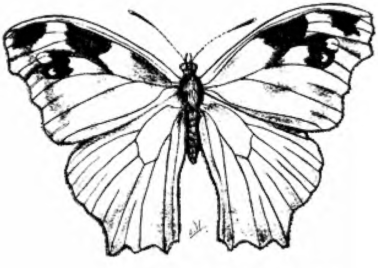
Lois Hughes

Creature Note #24 – Evening Brown

I just had to share this delightful interlude with fellow Club members. Hosing the garden late one afternoon, I disturbed a brown butterfly, whose shape was unfamiliar. It quickly darted between two large leaves, directly in front of me. On gently lifting the upper leaf I found an Evening Brown butterfly with a large chunk out of all its wings hence its unfamiliar shape, lying down, as if resting, its head on the lower leaf like a pillow, legs sticking up in the air, playing dead. I burst out laughing as it didn't even move one tiny muscle as I scrutinized it. So I quietly left it in peace, realizing it was still probably traumatized from its last close encounter, possibly from a large bird's beak. I was really impressed by its ingenuity and survival techniques!

After these incidents I've decided that the Evening Brown is one of my favourite butterflies, not because of its beauty, because it isn't particularly, although some of the individuals produced during the cooler months are richly coloured and distinctly marked, but because of its quirky nature.

I don't know what the attraction is, but quite often at dusk, they will fly into the kitchen and happily spend the night there and again fly out in the morning. Thinking one had lost its way, I carefully removed it only to have it return a few minutes later. Now I just enjoy their company.



Evening Brown – winter form

Word must have gotten out that I'm a soft touch as I had one join me, quite literally, for breakfast recently. Returning to the verandah with my cuppa, I found a rather tattered Evening Brown enjoying my rockmelon, pawpaw and grapes. It flew off as I approached so I picked up my dish and began eating only to have it return in a few moments. It did several laps of my chair and then "plonk" it landed right under my nose and began drinking again from the rockmelon. "Excuse me, but I hope you washed your feet before you landed on my breakfast" I said. I must have offended it because it flew away again. I had a juicy piece of fermenting watermelon in the compost bucket so brought the bucket out and set it near my chair and waited. Sure enough, it lapped the table a few times before happily landing on the watermelon and drank and drank. I was absolutely charmed by its fearlessness and didn't mind sharing my breakfast at all. That same evening while out shopping one was flitting around in the busy fruit shop, finally settling on the grapes. It gives a whole new dimension to "self-serve" as much as you can eat buffet style meals, doesn't it?

Evening Brown larva

Lois Hughes

BUTTERFLY GARDENING

PART 1 - GARDENING FOR BUTTERFLIES

Introduction

The flora and dependent fauna of South-east Queensland are suffering a grave crisis. Entire ecosystems are dying by the process of a thousand cuts, so we bystanders hardly notice the changes until it is too late to halt (or reverse) them.

Generally speaking, our native plants (over 400 of which are butterfly host species) are being replaced by exotic cultivars from overseas. Many of these are not utilised in any way by our local fauna which has come to co-evolve alongside the native plants which are critical for their very survival.

Butterflies and other insects form the basis of a complex web of life which can continue in a simplified form if a few of its links are broken, but will ultimately collapse, bringing us down with it, especially if a majority of links are severed.

To preserve our natural heritage, we must select those indigenous native plants which form the basis of our local food chains and grow them in our gardens, parks and degraded reserves.

Most people are probably beginning to tire of the lack of uniformity and sterile nature of exotics, not to mention their high maintenance and dependence on water, fertilisers and pesticides. Soon there will be a move away from these plants towards the local species which after all are interesting, ornamental and perfectly adapted to the local conditions of soil and climate of the area.

Many people enjoy watching butterflies visit their gardens, if only for a brief fly-through, but do not know how to keep them there, or set up a breeding colony of many species of these spectacular insects.

They do not appreciate the link between a butterfly and a native plant. Some people want to have perfect plants as well as butterflies - a contradiction in terms.

We have to become better educated, more tolerant of occasional chewed plants and appreciative of the virtues of our indigenous plants and not just pass them by as another piece of untidy scrappy bush to be cleared out and replaced by some 'prettier' plant from another region.

Getting Started

The first move is to buy a block of land or join a bushcare group to work on a reserve or park. You then have some ownership over what happens to the garden / bushland.

Secondly, carry out some background research into which butterflies you are likely to attract in your area. Some species are very local and do not fly very far, (e.g. Common Aeroplane). Others can migrate or fly some kilometres to find larval host plants, (e.g. Richmond Birdwing).

Thirdly, in your local area track down those plant species which are used by the local butterflies as larval food plants and adult nectar plants. (Many butterfly books contain such information, including my book Growing a Butterfly Garden in South-east Queensland.)

Finally select those species of plants which are suited to your garden . You will have to consider the following points:
(a) The ultimate size of the plants, e.g. a large tree is unsuited to a small garden.
(b) The soil type preferred by the plant. Your soil can be improved in drainage by raising the beds or altered by the addition of sand, compost, lime etc.
(c) The form of the plant and its life cycle, e.g. an annual may need to be replaced often or allowed to seed freely in the garden.
(d) The sun / shade aspect of your garden, e.g. if you have a rainforest garden established, you will not be able to grow sun-loving annuals. If your garden is mainly in full sun you will have more choices of plant selection. Most gardens have many microclimates so a given plant can be slotted into a preferred position.
(e) The availability of the plants. You may have to visit specialist nurseries as most nurseries do not stock the desired species. A list of specialist nurseries appears on pages 100 - 101 of my book.

You now have the basics for butterfly gardening and can look forward to attracting butterflies within weeks of planting your host plants.

Example - We planted *Hygrophila angustifolia* at our Hinterland Regional Park on a moist depression and only a few weeks later we witnessed the Tiny Grass Blue (*Zizula hylax attenuata*) flying around the plants.

Graham McDonald

PLANT PROFILE

Three-veined Laurel (*Cryptocarya triplinervis*)

Host for Butterfly : Blue Triangle (*Graphium sarpedon choredon*)

Height: Can grow to more than 10 metres tall.

Shape: Nicely rounded canopy.

Growth and features: Will tolerate full sun to a very shady position – but prefers a moist, well drained soil, suitable for a wide variety of soil types, will flower and fruit profusely – especially in full sun. Evergreen.

Fertilizer: Generally, a handful of one of the processed chicken manures (now readily available) upon planting, followed by a couple of handfuls every few months. Mulch to approximately 15 centimentres deep, keeping the mulch 15 centimetres from the trunk.

Why was this plant chosen?: Of the foodplants listed on our club poster, in my opinion, this is the one most suitable for the majority of garden situations. I took into consideration height, conditions tolerated, butterfly preference and the overall look of the tree as a garden specimen. This tree is also one of the best I've found for the larvae of Macleays Swallowtail (*Graphium macleayanum*).

Bob Miller

Ed. The following nurseries have been contacted and have available Blue Triangle host plants
Toona Rainforest Gardens, Mudgeeraba, Q. ph. 07 5530 5299.
Barb's Trees (The Native Plant Growers Network), McDowall, Q. ph. 07 3353 8182.
Fairhill Nursery, Yandina,Q. ph. 07 5446 7088
Barung Landcare Nursery, Maleny, Q.ph. 07 5494 3151
Greening Aust. Nursery, The Gap, Q. ph. 07 3300 6304, Fax. 07 3300 6305
Qld. D.P.I. Forest Service Nurseries, Bunyaville, Q. ph. 07 3353 1770

YOU ASKED

I have often wondered why many insects flounder along or have trouble gripping on to tree trunks when one of their six limbs is removed. Well Geoff Monteith answered part of this question during a recent talk to the U3A (see elsewhere this issue) when he demonstrated that insect ambulation is based on an alternating tripod arrangement, where fore and hind legs of one side and the middle leg of the opposite side are moved forward (or backward) in unison, the other 3 legs remaining stationary but subsequently move in unison once the initial three have gripped back on to the substrate, and so on. Its quite simple, but how many of us have ever given it any thought? As Geoff said, the tripod is the most stable support on any surface, which does not have to be flat or even. It's a bit more complicated on a vertical surface, as each of the three legs has a specific role to play – give it some thought and all will be revealed next issue!

John Moss

Lois, in answer to your request for a name for the Macadamia Leaf-miner moth (letters p17, BOIC Newsletter No. 15 December 1999), the name *Acrocercops chionosema* appears to be its formal title. The authoritative "Moths of Australia" by Ian Common (Melbourne University Press, 1990) illustrates the adult moth as Fig. 20.11, quite small as one would expect with a 7 mm wingspread and 3mm long. "Friends and Foes of Australian Gardens" by F.D. Hockings (Reed Books, 1980) illustrates the mined leaf as Fig. 54 and similarly "What Garden Pest or Disease is That?" by J. McMaugh (Lansdowne Press, 1985) shows the leaf mining damage on page 183.

This species belongs to the superfamily Tineoidea, to which also belong the infamous clothes moths! The generic (first part) name is curious as it literally means large abdominal appendages which neither larva nor adult possess. However it does have unusually long antennae in proportion to its body length, and this may be the origin of the name. The specific (last part) name probably refers to the bold wing pattern of alternating brown and silvery-white stripes.

John Moss

ERRORS AND OMISSIONS

Will the real Snake's Head Lacewing stand up (and be counted!)?
Last issue's Creature Feature made reference to the rarely seen Lacewing *Megapsychops illidgei* which is known colloquially as the Snake's Head Lacewing from its resemblance to the head and hood of a cobra. Unfortunately the story and species illustrated was of *Psychopsis coelivaga*, a commoner species, only half the size, but nevertheless quite remarkable for its pseudoreptilian appearance when at rest with wings folded tent-wise over its body (see BOIC Newsletter No. 16 page 16 March 2000).

Unfortunately the final-scanned, second illustration didn't quite convey the idea of a reptilian head with gaping mouth, and the caption 'Lacewing Moth' may have given the misleading impression that *Psychopsis* lacewings are moths. Although superficially like moths (and another order, Trichoptera – the Cassisflies), they belong to a separate order, Neuroptera, literally "nervy-winged". We apologise for these errors. In a later issue we hope to have a feature article on the real Snake's Head Lacewing – keep watching this space.

John Moss

When its not a butterfly and its not a moth what is it? It's a lacewing of the Psychopsidae family. In my ignorance I assumed if it wasn't a butterfly it was a moth and labeled the illustration as such in the Creature Feature "The Snake's Head Lacewing" in the last Newsletter. Sorry John.

Lois Hughes

Oops! We're in the ……… again.

Dung Beetle

Ed. Note/Errata:

We apologise for the errors that appeared in the two excursion reports last issue. Some of these were obviously "typos", but several need specific comment viz:
Page 7 The suggested new common name for Eastern Flat is "Bronze Flat" not Eastern Dusk-flat" – it is not a dusk flier like its near relatives. However many of us are happy to keep using the familiar old name "Eastern Flat".

Page 8 The name "Hairy Line Blue" for *Prosotas felderi* should of course have been Felder's Line Blue (or Line-blue if you like!) an unfortunate transposition error! As discussed in a previous issue, the proposed new common name "Southern Line-blue" is too vague, and sounds like the name of a railway or shipping company! A more appropriate specific name should be considered -- any readership suggestions?

The specific name for the Orchard Swallowtail is still *Papilio aegeus*, and the Grassdart known as *Ocybadistes walkeri* is yellow-banded not green in colour, although it has a greenish suffusion overlying the yellow pattern on the underside of the hindwings. The suggested new common name of "Green Grass-dart" is therefore quite misleading and "Greenish Grass-dart" would be a better choice, as there is also a "Greenish Darter" which has a greenish underwing suffusion.

Page 9 The Cicadas (note correct spelling!) were not all "seen" – some familiar ones were recorded as present from their songs, which are quite distinctive. The scientific name of the cicada "Phantom Knight" is not "official" yet and we should not have quoted it!! The manuscript describing this new species is currently with the editor of the Australian Entomologist – ie. It is "in press", under the joint authorship of club members John Moss and Max Moulds. However, we have it on good authority that it will be published this year. Only then can we call it *Psaltoda b----------s*!!

The bottle cicadas are at present undergoing revision and the name *Chlorocysta vitripennis* for the "Small Bottle Cicada" may have been applied to the wrong taxa. More on this once the work is published.

HAVE YOU GOT AN INVERTEBRATE STORY TO TELL? THIS MAGAZINE IS FOR THE MEMBERS TO SHARE THEIR OBSERVATIONS AND EXPERIENCES SO PLEASE CONTRIBUTE.

ITEMS OF INTEREST

Invertebrate Topics – Redland U3A Talks 2000

Monday 9.30 am Donald Simpson Centre, Bloomfield Street, Cleveland.
August 14 – Butterflies – Frank Jordan/Helen Schwencke (BOIC)
August 21 – Arachnids – Robert Raven (Queensland Museum)
September 11 – Cicadas – John Moss/Lindsay Popple (BOIC)
November 13 – Threatened Species – Mike Gregory (T.S. Network)

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From the Newspapers

Daily Post, Wales, UK – January 2000

Guardians leap into action to save butterflies

The battle is on to save the butterfly population of North Wales from extinction. While many have died out completely in counties across the region, others are clinging tenuously to life.
A hundred years ago, taking a stroll down a leafy North Wales country lane in summer, the casual observer would have witnessed an environment teeming with one of nature's most graceful inhabitants.

But in modern times it is a different story. Intensive farming and forestry have led to widespread destruction of flower rich meadows, hedgerows, ancient woodlands and wild corners – all crucial habitats for butterflies and other wildlife.

Welsh deciduous woodlands, home to many of the more sensitive butterflies, have also changed beyond recognition becoming too shady or replaced with dense conifer plantations – neither an ideal home for the butterfly.

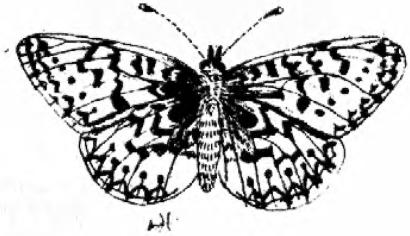
The national Butterfly Conservation organization is leaping to its defence and will be touring North Wales in the millennium holding workshops to train people to record and safeguard butterflies and moths.

The Pearl-bordered Fritillary butterfly – *Bolaria euphrosyne* – is one such species desperately fighting for survival in North Wales.

It became officially extinct in the old counties of Anglesey and Camarthenshire in 1979 and has not been seen in the Merionydd region since 1982.

There are about 13 colonies in Wales and at present only about three sites battling for life in North Wales, between Flinshire and Denbighshire.

The population has undergone a 95 per cent decline across Britain in 15 years with a 50 per cent decline in population in Wales.



Pearl-bordered Fritillary

Wales also provides an important haven for the Marsh Fritillary butterfly, a species which is under serious threat across the whole of Europe.

It became extinct in the Denbighshire and Flintshire regions in the 1950's and has declined from 10 known sites to three in Anglesey from 1970 to 1990.

There are also six known locations around Caernarfon where the species still exists.

And the story is no better across Britain. Five resident species out of 59 have become extinct.

Conservationists say the future of half of the remaining species hangs in the balance, undergoing rapid decline.

Moths, the largely nocturnal cousin of the butterfly, are also disappearing at an alarming rate. Over 50 of 900 larger species are threatened.

Butterfly Conservation know they cannot turn the clock back against the tide of change, but believe much can be done to help the creatures battle against the odds.

They are taking on Butterfly Guardians – inviting members of the public to attend a series of training sessions.

Nichola Davies, of Butterfly Conservation said: " Butterfly Guardians is an important conservation initiative as many parts of Wales contain vital habitat for some of the UK's most vulnerable butterflies and moths."

The project will be starting training sessions next year in North Wales in Gresford Memorial Hall.

LETTERS

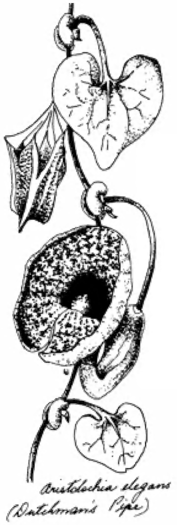
The following was received from Felix Jenkins

Unusual Moments in Nature – Butterfly in Distress?

One morning a long time ago I wandered warily through the rain forest. It was my first time after a long trip from my home town and anticipation of what I would find kept every nerve on edge. Then I saw it. Fluttering down the track, flashing iridescent green in the intermittent sunbeams was a giant Birdwing Butterfly. Hardly daring to breathe I raised my net and captured it. I was so excited then. These days I breed them from a few of the many eggs that each female lays to produce an average of just two adults.

Pararistolochia praevenosa

The giant Cairns Birdwing (*Ornithoptera priamus euphorion*) grows ten inches across. Today, I know it is still holding its own because quite a lot of its natural food plant is still growing in the surrounding areas. As a young man I had collected a very large proportion of the local butterflies but had always looked forward to adding one of those Birdwings to my collection and its fulfilment was a thrilling event to smaller relative but still lovely insect the Richmond Birdwing (*O.priamus richmondia*) which until recently I had never seen in the wild, let alone collected. As the name suggests this is still to be found in areas adjacent to the Richmond River. Unfortunately unless we do something about it, this beautiful butterfly will become extinct. There are two reasons for this. Firstly, its food plant *Aristolochia praevenosa* and *A. tagala* only grow in a few local rain forest areas and a lot of these have been cleared. Secondly, a common garden plant The Dutchman's Pipe, an imported member of the Aristolochia family is acting as a fatal trap. The female lays eggs on it but the larvae cannot eat it and so they die and this is rapidly speeding up the rate of decline.



Dutchman's Pipe

Well! What can we do about it? I think it would be nearly impossible to discourage people from growing the imported Aristolochia, the beautiful Dutchman's Pipe, but what can we do? If we live anywhere in Northern NSW or Southern Queensland we can grow some of the native Aristolochias such as *Aristolochia deltantha, A. indica, A. praevenosa* or *A. tagala.* Try your local Native Plant Nursery. Because *Aristolochia tagala* is a better garden plant than the readily available *A. praevenosa* I advise that you try and get it. ***Felix Jenkins***

Ed. Note: *Aristolochia tagala* from North Queensland may well be a better garden plant, but it is not the native hostplant for the Richmond Birdwing and may itself become weedy in south-east Queensland as many other N.Q. natives have become. Because of the large quantity of seed this plant produces and the fact that some seeds remain viable for at least 3 years it may become weedy. However the Big Greasy Butterfly also feeds on this plant. In some situations it would reduce the potential weediness of the plant. Because *A. tagala* is an unknown quantity it is preferable to use the local native plant *Pararistolochia praevenosa.* We invite comment from readers who have had experience with *A. tagala.*

LIBRARY BOOKS FOR LOAN

The following books are currently available for loan at meetings:-

Australia's Butterflies, by Peter Wilson
Butterfly Magic, by Helen Schwencke and Frank Jordan
Australian Cicadas, by Max Moulds
Butterflies of Australia, by Common and Waterhouse, 1981
Butterfly Watching, by Paul Whalley
Flying Colours, by Mike and Pat Couper
All Colour Book of Butterflies, by Robert Goodden
Lifecycle of the Ulysses Butterfly, Video, by Janet Richardson
Lifecycle of the Cairns Birdwing Butterfly, Video, by Janet Richardson

BACK ISSUES

Back Issues of the Club Magazine are available at a cost of $1 each plus postage (3-6 copies - $1.50. 1-2 copies $1.10)

ADS AND EXCHANGES

Sometimes you may have an oversupply of legally obtained caterpillars of non restricted species and your food supply will not hold out. If this happens, contact Rob MacSloy - 07 3824 4348 - who operates the Register of Host Plants. He can put you in touch with prospective "foster parents'. Have **YOU** advised Rob of the host plants you have available?

Felix Jenkins, 11 Seaview Street, Kingscliff, 2487 NSW, can supply *Aristolochia tagala* seeds with instructions on how to germinate, plant out and replacement seeds if these fail to germinate. $5.

BUTTERFLY AND OTHER INVERTEBRATES CLUB PROGRAMME

Please note that the Dragonfly Talk which was to take place on the 28th June has been rescheduled to August. Details below.

A talk and video presentation on Ant/Butterfly associations by Rod Eastwood.

When: Wednesday 26th July, 2000 at 7.30pm

Where: Indigiscapes Centre, Runnymede Road, Capalaba

What: The Club will be joining the Redlands Branch of the Society for Growing Australian Plants for a joint meeting

Background: Rod has recently helped produce two documentaries for TV. One, a BBC doco narrated by Sir David Attenborough, is on Australian butterflies in general. The other made for the Discovery Channel has a section produced by Rod on Australian ant/butterfly associations. Neither of these two videos has as yet been to air on Australian television, so we will see them first!

R.S.V.P. John Moss, ph. 07 3245 2997

A talk and slide show on Dragonflies and Damselflies by longstanding Qld. Nats. Club member and Australian Dragonfly Society founding member Deniss Reeves.

When: Wednesday 23rd August, 2000 at 7.30 pm

Where: Downfall Creek Bushland Centre, Rode Road, West Chermside

What: Deniss, a pharmacist by profession, is probably Australia's leading Odonata authority, since the untimely death of C.S.I.R.O.'s Dr. Tony Watson

R.S.V.P. John Moss, ph 07 3245 2997

The Club proposes to have an excursion (probably to North Brook Creek) in October or November as a followup to the dragonfly talk. Details in September Newsletter.

If you plan to attend any of the above events please respond to the person indicated in case, for some unforeseen circumstance, the event has had to be postponed or cancelled.

DISCLAIMER

The Newsletter seeks to be as scientifically accurate as possible but the views, opinions and observations expressed are those of the authors. The Newsletter is merely a platform for people to express their views and are not necessarily those of the BOIC. If inaccuracies have inadvertently occurred and are brought to our attention we will seek to correct them in future editions. The Editor reserves the right to refuse to print any matter which is unsuitable, inappropriate or objectionable and to make nomenclature changes as appropriate.

ACKNOWLEDGMENTS

Producing this newsletter is done due to the efforts of:

- Those members who have sent in letters and articles
- Lois Hughes who provided illustrations and developed the cover
- Daphne Bowden who works on layout, production and distribution
- John Moss for scientific referencing
- Helen Schwencke who developed the overall design and works on content
- Frank Jordan for inspiration

We would like to thank all these people for their contribution

ARE YOU A MEMBER

Please check your mailing label for the date your membership is due for renewal. If your membership is due, please renew as soon as possible.
Membership fees are $10.00 for Individuals/Schools and $15 for family membership.

Butterfly and Other Invertebrates Club Inc.
c/- PO Box 2041
Runcorn Q 4113

Next Meeting: Wednesday 26th July, 2000 – A talk and video presentation on Ant/Butterfly associations.